'A River Is Living': 'Moving' Words Elicit False Animacy Impressions

ABSTRACT

The influences of verbally-referenced motion cues on perceptions of animacy were examined using the animacy decision paradigm. Undergraduates misidentified plants as nonliving and erroneously judged moving nonliving entities as living, a common mistake among young children. This finding indicates that the association of 'moving is living' underlies the animate-inanimate distinction.

SUMMARY

A diverse range of animacy cues, ranging from featural to psychological traits, induce subjective impressions of animacy which can either directly or indirectly affect decisions on the animate-inanimate distinction. The current study investigated the influences of verbally-referenced motion cues (i.e. 'moving' words such as boat, river) on the perception of animacy, with focus on whether the mere exposure to such cues interfere with animacy judgement. Motion cues have been of theoretical interest in the study of animacy perceptions because they appear to be the primary information that humans consciously or unconsciously rely on when making distinctions between animate and inanimate entities (Feldman & Tremoulet, 2000; Goldberg & Thompson-Schill, 2009). In addition, motion cues are able to convey a wealth of socially meaningful information from even a brief exposure. Therefore there are reasons to believe motion cues being conveyed by words referring to a moving or non-moving entity are sufficient to elicit animacy impressions. It was hypothesized that target 'moving' words from both animate and inanimate domains will be erroneously judged as animate whereas 'non-moving' target cues will be judged as inanimate even though they are alive.

Sixty-five undergraduates (*M* age = 21 years, *SD* = 3.08) who have English as their first language participated in a speeded animacy decision task. They were instructed to respond as quickly and accurately as possible as to whether each presented target word item referred to a living or nonliving thing. Each domain comprises different categorical entities. The 'living' domain included categories of animals, plants and humans (e.g. artist, athlete). The 'nonliving' domain included a range of moving and non-moving natural kinds (e.g. moon, stone) and artifacts (e.g. truck, bench). Response times and accuracy rates were compared across different categorical entities as a measure of performance.

The results supported the hypothesis whereby living moving entities (i.e. animals, humans) and non-moving nonliving entities (e.g. towel, pencil, island, cave) facilitated responses during the determination of life status. In contrast, slower responses and more errors occurred when judging the life status of nonmoving-living (i.e. plants) and moving-nonliving entities (e.g. truck, moon). This showed that adults also encounter difficulties in verifying the life status of entities such as plants, moving natural kinds and artifacts, a phenomenon that was previously reported among young children who have yet to grasp scientific understanding about living entities (Piaget, 1972; Brenneman, Zuza & Gelman, 2003). Verbally-referenced motion in general, regardless of whether referring to animate or inanimate forms, is sufficient to elicit animacy impressions despite participants' familiarity with the nature of these items. Animacy interpretations can be induced in the absence of visual cues for real or simulated motion. The study has highlighted what has been long assumed – that motion per se matters less than other reliable informal cues (e.g. biological processes) in making animate-inanimate distinctions. Furthermore, this effect across human development appears to be more persistent than previously thought.